

## Abstract

An electronic imaging chip containing an array of photodiodes includes a multiplexed column buffer. The multiplexed column buffer serves a plurality of columns in the photodiode array. By multiplexing active amplifier elements, such as the differential gain amplifiers and the bus driver amplifiers, a wider area than one column width is available on the semiconductor chip for layout of the column buffer. In the disclosed embodiment, 4 columns share a common multiplexed column buffer. The area available for layout of the multiplexed column buffer is 4 times as wide as compared to that for a non-multiplexed column buffer.